

REMARKS

At the outset, the Examiner is thanked for the thorough review and consideration of the subject application. The Office Action of February 17, 2004 has been received and contents carefully reviewed.

By this Amendment, Applicants amend claims 10, 15 and 19-20. Accordingly, claims 1-20 are currently pending in the present application. Reexamination and reconsideration of the application are respectfully requested.

In the Office Action, the Examiner objected to claim 19 because of informalities. Applicants respectfully submit that in view of the amendment in claim 19, the objection is now believed to be moot.

In addition the Examiner rejected claims 1, 3-7, and 9 under 35 U.S.C. § 103(a) as being unpatentable over den Boer et al. (US Pat. No. 5,641,974) in view of Yoshino (US Pat. No. 5,358,810) and Murade (US Pat. No. 6,388,721); rejected claim 2 under 35 U.S.C. § 103(a) as being unpatentable over den Boer et al. in view of Yoshino and Murade as applied to claims 1, 3-7, and 9 above, and further in view of Kobayashi et al. (US Pat. No. 5,847,792); rejected claim 8 under 35 U.S.C. § 103(a) as being unpatentable over den Boer et al. in view of Yoshino and Murade as applied to claims 1, 3-7, and 9 above, and further in view of Hanazawa et al. (US Pat. No. 5,953,088); rejected claims 10-12, 14 and 20 under 35 U.S.C. § 103(a) as being unpatentable over Hanazawa et al. ('088) in view of Murade; rejected claim 13 under 35 U.S.C. § 103(a) as being unpatentable over Hanazawa et al. ('088) in view of Murade as applied to 10-12, 14 and 20 above and further in view of Hanazawa et al. (US Pat. No. 6,400,427) and den Boer et al.; rejected claims 15-17 under 35 U.S.C. § 103(a) as being unpatentable over Hanazawa et al. ('088) in view of Yamashita et al. (U.S. Patent No. 5,659,375); rejected claim 18 under 35 U.S.C. § 103(a) as being unpatentable over Hanazawa et al. ('088) in view of Yamashita et al. as applied to claims 15-17 above, and further in view of Hanazawa et al. ('427) and den Boer et al.; rejected claim 19 under 35 U.S.C. § 103(a) as being unpatentable over den Boer et al. in view of Yoshino and Murade as applied to claims 1, 3-7, and 9 above, and further in view of Yamashita et al. Applicants respectfully traverse these rejections.

The rejection of claims 1, 3-7, and 9 under 35 U.S.C. § 103(a) as being unpatentable over den Boer et al. (US Pat. No. 5,641,974) in view of Yoshino (US Pat. No. 5,358,810) and Murade (US Pat. No. 6,388,721), the rejection of claim 2 under 35 U.S.C. § 103(a) as being unpatentable over den Boer et al. in view of Yoshino and Murade as applied to claims 1, 3-7, and 9 above, and further in view of Kobayashi et al., the rejection of claim 8 under 35 U.S.C. § 103(a) as being unpatentable over den Boer et al. in view of Yoshino and Murade as applied to claims 1, 3-7, and 9 above, and further in view of Hanazawa et al., claim 19 under 35 U.S.C. § 103(a) as being unpatentable over den Boer et al. in view of Yoshino and Murade as applied to claims 1, 3-7, and 9 above, and further in view of Yamashita et al. are respectfully traversed and reconsideration is requested.

Claim 1 is allowable over the cited references in that claim 1 recites a combination of elements including, for example, “...wherein the black matrix of the color filter plate asymmetrically overlaps the data line of the thin film transistor plate.” None of the cited references, singly or in combination, teaches or suggests at least this feature of the claimed invention. Accordingly, Applicants respectfully submit that claim 1, and claims 2-5, which depend therefrom, are allowable over the cited references.

In the Office Action on page 4, the Examiner states, “Murade teaches that when the distances L3 and L3’ from the lateral edges of the data line 3 to the lateral edges of the black matrix 6 satisfy the formula $L3, L3' \leq 1$ micrometer, the pixel aperture is not hardly affected by the existence of the black matrix (col. 21, lines 1-10). Accordingly, the distances L3 and L3’ may be different as long as the above formula is satisfied.”

Applicants respectfully submit that Murade relates to a LCD device that can minimize a *leakage current* of the TFT caused by light, while one of the subject matters of the present application is to prevent a light leakage caused by the distortion of the liquid crystal molecules near the data line during an application of an electric field. [emphasis added] See Col. 2, lines 7-14 of Murade. In addition, Murade favors elimination of a black matrix in the LCD device. See at Col. 20, lines 55-61.

Moreover, Applicants respectfully submit that the Examiner’s conclusion that “the distances L3 and L3’ may be different as long as the above formula is satisfied” is a hindsight reconstruction based on the teachings of the present application, which is impermissible. As best

understood, the black matrix 6 symmetrically overlaps the data line 3 in Fig. 14 of Murade, and nowhere in Murade discloses that L3 can be different from L3'.

Claim 6 is allowable over the cited references in that claim 6 recites a combination of elements including, for example, “wherein the pixel electrode partially overlaps the first data line at a first end of the pixel electrode... wherein the pixel electrode asymmetrically overlaps a second data line at a second end of the pixel electrode opposite the first end.” None of the cited references, singly or in combination, teaches or suggests at least this feature of the claimed invention, for the reasons discussed above with respect to claim 1. Accordingly, Applicants respectfully submit that claim 6, and claims 7-9 and 19, which depend therefrom, are allowable over the cited references.

The rejection of claims 10-12, 14 and 20 under 35 U.S.C. § 103(a) as being unpatentable over Hanazawa et al. ('088) in view of Murade, the rejection of claim 13 under 35 U.S.C. § 103(a) as being unpatentable over Hanazawa et al. ('088) in view of Murade as applied to 10-12, 14 and 20 above and further in view of Hanazawa et al. and den Boer et al., the rejection of claims 15-17 under 35 U.S.C. § 103(a) as being unpatentable over Hanazawa et al. ('088) in view of Yamashita et al., and the rejection of claim 18 under 35 U.S.C. § 103(a) as being unpatentable over Hanazawa et al. ('088) in view of Yamashita et al. as applied to claims 15-17 above, and further in view of Hanazawa et al. ('427) and den Boer et al. are respectfully traversed and reconsideration is requested.

Claim 10 is allowable over the cited references in that claim 10 recites a combination of elements including, for example, “wherein a cut-off film is formed under the data line, said cut-off film being asymmetrically overlapped by the data line and being partially overlapped by the pixel electrode according to an alignment direction, and wherein the cut-off film is substantially overlapped by the data line in the data line direction.” None of the cited references, singly or in combination, teaches or suggests at least this feature of the claimed invention. Accordingly, Applicants respectfully submit that claim 10, and claims 11-14, which depend therefrom, are allowable over the cited references.

Applicants respectfully submit that to establish a prima facie case of obviousness under 35 U.S.C. § 103, the prior art references when combined must at least teach or suggest all the claim elements.

In Fig. 10 of Hanazawa et al. ('088), only the L2 portion of 53a and the L1 portion of 53b are partially overlapped by the pixel electrode. Other portions of the shield electrodes are overlapped by the neighboring pixel electrodes. Further, neither the L2 portion of 53a subtracted by the length of the common area between L1 and L2 nor the L1 portion of 53b subtracted by the length of the common area between L1 and L2 teaches the limitation, "wherein the cut-off film is substantially overlapped by the data line in the data line direction."

Claim 15 is allowable over the cited references in that claim 15 recites a combination of elements including, for example, "forming a pixel electrode connected to the drain electrode through the contact hole on the passivation layer, the pixel electrode being asymmetrically overlapped with the data line region according to the alignment direction of the alignment film, wherein the pixel electrode partially overlaps the cut-off film, and the cut-off film is substantially overlapped by the data line in the data line direction." None of the cited references, singly or in combination, teaches or suggests at least this feature of the claimed invention. Accordingly, Applicants respectfully submit that claim 15, and claims 16-18, which depend therefrom, are allowable over the cited references.

Claim 20 is allowable over the cited references in that claim 20 recites a combination of elements including, for example, "a cut-off film under the data line, the cut-off film being asymmetrical with the data line according to the alignment direction of the alignment layer, wherein the cut-off film is substantially overlapped by the data line in the data line direction..." None of the cited references, singly or in combination, teaches or suggests at least this feature of the claimed invention. Accordingly, Applicants respectfully submit that claim 20 is allowable over the cited references.

Applicants believe the foregoing amendments place the application in condition for allowance and early, favorable action is respectfully solicited. If the Examiner deems that a telephone conference would further the prosecution of this application, the Examiner is invited to call the undersigned attorney at the telephone number (202) 496 - 7500. All correspondence should continue to be sent to the below-listed address.

If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136, and any additional fees required under 37 C.F.R. §1.136 for any necessary extension of time, or any other fees required to complete the

filings of this response, may be charged to Deposit Account No. 50-0911. Please credit any overpayment to deposit Account No. 50-0911.

Dated: May 17, 2004

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In Fig. 10 of Hanazawa et al. ('088), only the L2 portion of 53a and the L1 portion of 53b are partially overlapped by the pixel electrode. Other portions of the shield electrodes are overlapped by the neighboring pixel electrodes. Further, neither the L2 portion of 53a subtracted by the length of the common area between L1 and L2 nor the L1 portion of 53b subtracted by the length of the common area between L1 and L2 teaches the limitation, "wherein the cut-off film is substantially overlapped by the data line in the data line direction."

Claim 15 is allowable over the cited references in that claim 15 recites a combination of elements including, for example, "forming a pixel electrode connected to the drain electrode through the contact hole on the passivation layer, the pixel electrode being asymmetrically overlapped with the data line region according to the alignment direction of the alignment film, wherein the pixel electrode partially overlaps the cut-off film, and the cut-off film is substantially overlapped by the data line in the data line direction." None of the cited references, singly or in combination, teaches or suggests at least this feature of the claimed invention. Accordingly, Applicants respectfully submit that claim 15, and claims 16-18, which depend therefrom, are allowable over the cited references.

Claim 20 is allowable over the cited references in that claim 20 recites a combination of elements including, for example, "a cut-off film under the data line, the cut-off film being asymmetrical with the data line according to the alignment direction of the alignment layer, wherein the cut-off film is substantially overlapped by the data line in the data line direction..." None of the cited references, singly or in combination, teaches or suggests at least this feature of the claimed invention. Accordingly, Applicants respectfully submit that claim 20 is allowable over the cited references.

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